GSDO
GROUND SYSTEMS
DEVELOPMENT & OPERATIONS

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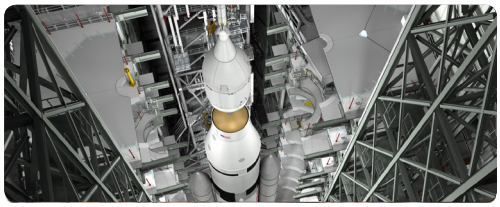

PROGRAM HIGHLIGHTS • MARCH 2015

At NASA's Kennedy Space Center in Florida, the Ground Systems Development and Operations (GSDO) Program Office is leading the center's transformation from a historically government-only launch complex to a spaceport bustling with activity involving government and commercial vehicles alike. GSDO is tasked with developing and using the complex equipment required to safely handle a variety of rockets and spacecraft during assembly, transport and launch. For more information about GSDO accomplishments happening around the center, visit http://go.nasa.gov/groundsystems.

Crawler-Transporters Celebrate 50 Years

NASA's crawler-transporters, two of the largest vehicles ever built, have carried NASA rockets and spacecraft to the launch pad for the last 50 years. They will continue their legacy as the "workhorses" of the nation's space program as part of the agency's journey to Mars.

The crawlers are being modified to carry NASA's Space Launch System (SLS) with the Orion spacecraft atop it and potential commercial vehicles to their pads to begin space exploration missions. Originally constructed in 1965 to support the agency's Apollo Program, they also supported the Skylab, Apollo-Soyuz Test Project and Space Shuttle Program, helping NASA push the boundaries of human space exploration farther into the solar system.

To celebrate its 50th year of supporting NASA missions, the upgraded and modified crawler-transporter 2, known as CT-2, rolled out of the Vehicle Assembly Building (VAB) on Feb. 18 and began the 4.2-mile trek to Launch Pad 39B at NASA's Kennedy Space Center in Florida. NASA, members of the media and guests paid tribute during a viewing and tour of the crawler at the pad Feb. 23.

The Ground Systems Development and Operations Program (GSDO) at Kennedy has been busy beefing up crawler-transporter 2 to be ready to support SLS and Orion. CT-1 will be available to carry a variety of other launch vehicles.

Using these vehicles, NASA will send astronauts farther than ever before, first to an asteroid, and onward to Mars. The modifications will enable the crawlers to continue supporting human spaceflight for another 20 years.

"The crawlers are ready to support NASA's SLS program and commercial missions for the next half century," said John Giles, crawler project deputy manager. "This continued support would not be possible without the managers, engineers and technicians that maintain these highly unique and specialized pieces of equipment."

For the complete story, visit http://go.nasa.gov/17OxBEK.

During a media event Feb 23, members of the press and photographers ride on NASA's crawler-transporter 2 as it slowly moves along the crawlerway on a test run to Launch Pad 39B. Photo credit: NASA/Cory Huston

View an infographic about the crawlers at http://go.nasa.gov/1CtzVw9

New Work Platforms for VAB High Bay 3

A construction worker at Sauer Co. in Oak Hill, Florida, works on the buildup of the first of 10 new work platforms. Photo credit: NASA/Ben Smegelsky

New work platforms for High Bay 3 of the Vehicle Assembly Building are being manufactured at Sauer Co. in Oak Hill, Florida.

The first platform, scheduled to arrive in April, will be placed on a test rig on the west side of the VAB to be prepared for onsite integration.

A contract to modify High Bay 3 was awarded by NASA to the Hensel Phelps Construction Co. of Orlando, Florida, in March 2014. Sauer is a subcontractor to Hensel Phelps.

The Ground Systems Development and Operations Program is overseeing upgrades and modifications to the high bay to support processing of NASA's Space Launch System and Orion spacecraft, and other exploration vehicles.

Launch Pad 39B Milestone Reached

The Pad Team reached a new milestone with the modifications of the ignition overpressure/sound suppression systems (IOP/SS) project.

The installation of the new 60- and 54-inch pipes that will connect the IOP/SS is completed. Now the contractor will proceed to connect all the new pipes inside the catacombs. Construction is expected to be completed by September.

When completed, the IOP/SS will protect NASA's Space Launch System rocket from acoustic damage by providing a water deluge on the mobile launcher (ML) deck as well as the flame deflector.

Also, a construction contract was awarded to Sauer for the installation of three new 30-inch by-pass valves that will prevent water from getting by the ML "rainbirds" sprinkler system in case of a launch abort.

A construction worker looks over the newly-installed overpressure/sound suppression systems pipes on the surface of Launch Pad 39B. Photo credit: NASA/Jose Perez Morales

NASA Awards Flame Trench Construction Contract

NASA awarded a contract to J.P. Donovan Construction of Rockledge, Florida, to construct a new flame deflector and refurbish the flame trench at Launch Pad 39B for use in future launches of NASA's new Space Launch System (SLS) rocket. The SLS will be used to help send humans to deep space destinations, including an asteroid and Mars.

The contractor will provide labor, equipment and materials for the construction of the flame deflector and refurbish and modify the flame trench. The completed structure will deflect SLS exhaust away from the vehicle and protect structures above the launch pad surface.

The work done on this contract will support Kennedy's GSDO Program. Building on five decades of launch and processing excellence, GSDO is transforming the center into a multi-user spaceport capable of accommodating a wide array of government and commercial space activities.

The Apollo-era brick surface and shuttle-era flame deflector have been removed from the flame trench at pad B in this wide angle view of the pad area. Photo credit: NASA/Jose Perez Morales

EFT-1 Recovery Director Jeremy Graeber, at right, presented an update on Orion recovery efforts during a Kennedy Engineering Academy session Feb. 19 at OSB II. He is shown in this photo with co-presenter Scott Wilson, manager of Orion Production Operations. Photo credit: NASA

Employee Spotlight: Charlie Blackwell-Thompson

Charlie Blackwell-Thompson is the chief of the Test Management Office in the Ground Systems Development and Operations Program (GSDO). She is a member of the operations team that develops the plans, procedures and processes for integrated testing, launch and recovery operations for GSDO, the Space Launch System and Orion.

"We are planning for future operations, how we're going to process flight hardware and how we're going to integrate it, test it, launch it, and then recover it," Blackwell-Thompson said.

She has worked at Kennedy for just over 25 years, beginning her career in payload processing, integrating and testing, and then being part of the launch team in the Launch Control Center firing room for space shuttle launches.

"It's pretty amazing being part of the program that integrates and launches the flight hardware that's going to take us beyond low-Earth orbit," Blackwell-Thompson said.

Her favorite car was a Datsun 260Z that she received for her 18th birthday.

Some of her hobbies and interests include watching her children play sports and play music. She also likes to travel, play tennis and do craft projects.

Blackwell-Thompson is the proud mother of three great kids: Matt, 21, Cody, 19, and Lhotse, 15.

Her house is full of pets, including a cat named Tiger and three dogs, Sammie, Dolli Blue and Missy.

Charlie Blackwell-Thompson

Phil Weber is the senior technical integration manager and works in the front office for the GSDO Program at Kennedy. He was nominated by NASA as one of the 25 civil servants from across the federal government for the Federal Engineer of the Year Award. Although he did not receive the top award, he did attend the ceremony Feb. 26 at the National Press Club in Washington, with his wife, Mary Ann.

From far left, is Mark J. Golden, executive director of the National Society of Professional Engineers (NSPE); Harve D. Hnatiuk, P.E., NSPE president; Dawn Schaible, NASA deputy chief engineer; Weber; and Scott Wolf, P.E., NSPE board member.

"With our amazing mission, and our talented team, it is clear to me that Kennedy and GSDO are capable of anything," Weber said.

View the latest video on NASA's exploration systems development programs, "Preparing America for Deep Space Exploration Episode 8: Taking Flight," at http://youtu.be/rx_dj8u3Pvg